

AMENDMENTS TO THE SPECIFICATION

In paragraph [0041]: Fig.11 shows a third embodiment differential type switched capacitor circuit 20f according to the present invention. In Fig.11, the switched capacitor circuit 20f comprises a positive side capacitor 110, a negative side capacitor 112, a first positive side switch element 114, a first negative side switch element 116, a second positive side switch element 118, a second negative side switch element 120, a third switch element 122, a center switch element 126, and a sequence controller 124. In the third embodiment, the switch elements are NMOS transistors, the first positive side switch element 114 and the first negative side switch element 116 being of substantially the same size and larger than the second positive side switch element 118 and the second negative side switch element 120, which are also of substantially the same size. Additionally, the third switch element 122 is substantially the same size as the second positive and negative side switch elements 118, 120; and the center switch element 126 is larger than the first positive side switch element 114 and the first negative side switch element 116. The positive side capacitor 110 is connected between the first oscillator node OSC_P and a node A. The negative side capacitor 112 is connected between the second oscillator node OSC_N and a node B. The center switch element 126 selectively connects node A to node B depending on a center control signal SW_center. The first positive side switch element 114 selectively connects node A to node C depending on a first control signal SW1. The first negative side switch element 116 selectively connects node B to node C depending on the first control signal SW1. The second positive side switch element 118 selectively connects node A to ground depending on the second control

signal SW2, and the second negative side switch element 120 selectively connects node B to ground depending on the second control signal SW2. The third switch element 122 selectively connects node C to ground depending on a third control signal SW3. Finally, the sequence controller 124 generates the first, second, and third control signals SW1, SW2, SW3 as well as the center control signal SW_center.

In paragraph [0044]: Fig.13 shows a fourth embodiment 10 differential type switched capacitor circuit 20g according to the present invention. In Fig.13, the switched capacitor circuit 20g comprises a positive side capacitor 130, a negative side capacitor 132, a first positive side switch element 134, a first negative side switch element 136, a second positive 15 side switch element 138, a second negative side switch element 140, a third switch element 142, a center switch element 146, a low-pass filter 148, and a sequence controller 144. In the fourth embodiment, the switch elements are PMOS transistors, the first positive side switch element 134 and the first 20 negative side switch element 136 being of substantially the same size and larger than the second positive side switch element 138 and the second negative side switch element 140, which are also of substantially the same size. Additionally, the third switch element 142 is of substantially the same size 25 as the second positive and negative side switch elements 138, 140; and the center switch element 146 is larger than the first positive side switch element 134 and the first negative side switch element 136. The sequence controller 144 generates a center control signal SW_center, a first control signal SW1, 30 and a second control signal SW2. The second control signal is connected to the input of the low-pass filter 148 and the output of the low-pass filter is a filtered version of the

second control signal SW2_filter. The positive side capacitor 130 is connected between the first oscillator node OSC_P and a node A. The negative side capacitor 132 is connected between the second oscillator node OSC_N and a node B. The center switch 5 element 146 selectively connects node A to node B depending on a center control signal SW_center. The first positive side switch element 134 selectively connects node A to node C depending on a first control signal SW1. The first negative side switch element 136 selectively connects node B to node 10 C depending on the first control signal SW1. The second positive side switch element 138 selectively connects node A to a VCC power supply node depending on the filtered control signal SW_filter, and the second negative side switch element 140 selectively connects node B to the VCC power supply node 15 depending on the filtered control signal SW_filter. Finally, the third switch element 142 selectively connects node C to the VCC power supply node depending on the filtered control signal SW_fitler.